



STATE OF MARYLAND
BOARD OF NATURAL RESOURCES

THE MARYLAND FISHERY MANAGEMENT PLAN

R. E. TILLER



Maryland University Natural Resources Institute

MAY, 1944

EDUCATIONAL SERIES, NO. 1

•

DEPARTMENT OF RESEARCH AND EDUCATION

Solomons Island, Maryland

HC

107

M3M39

Folio

nos. 1-24

State of Maryland
DEPARTMENT OF RESEARCH AND EDUCATION

Commissioners:

E. N. Cory, *Chairman*.....College Park
H. R. Bassett.....Crisfield
Lloyd M. Bertholf.....Westminster
Julian D. Corrington.....Chestertown
B. H. Willier.....Baltimore

Director:

R. V. Truitt.....Solomons Island

State Weather Service:

J. BILY, JR., *Acting State Meteorologist*.....Baltimore

Chesapeake Biological Laboratory:

G. F. Beaven, M. A., *Biologist I, Oyster Investigations, Resident Manager*
L. Eugene Cronin, M. S., *Biologist II, Crab Investigations*
R. C. Hammer, M. S., *Biologist II, Fishery Investigations. In charge of Hatcheries*
Harvey Mister, *Captain, Fish Culturist*
Marcella E. Cassidy, *Secretary*
R. A. Olson, Ph. D., *Biologist II. In charge of Hydrography and Pollution (Active Duty, U. S. Naval Reserve)*
Dorothy C. Morse, M. S., *Assistant Chemist*
Richard E. Tiller, M. S., *Biologist II, Fishery Investigations*
Willis L. Tressler, Ph. D., *Planktologist. Assistant Professor of Zoology, University of Maryland*
R. V. Truitt, Ph. D., *Biologist*

THE MARYLAND FISHERY MANAGEMENT PLAN ¹

R. E. TILLER

Department of Research and Education

The ability of the Maryland commercial fisherman to harvest his crops is based not on years, but on *generations* of experience. His knowledge of fishing methods and operations is unequalled. An attempt to tell him how, or when, or where to fish his gear would be as ridiculous as a fisherman attempting to tell a surgeon how to perform a delicate operation.

It must be kept in mind, however, that any source of supply of natural resources can stand only a certain drain and still maintain a constant yield. A well can put forth only a certain number of gallons of water per day without running dry, and similarly a plot of farmland can withstand only a certain intensity of farming before the soil becomes worthless. The supply of fish in the Bay follows exactly the same rule, and can stand not more than a certain rate of fishing.

U. S. Fish and Wildlife Service records for the past fifty years show an alarming decline in Maryland's fisheries. Shad catches have dropped from 7,128,000 pounds to 446,000 pounds, and herring from 19,767,000 to 4,678,000 pounds in the fifty years between 1890 and 1940. Besides these fish of major importance, other less valuable species have shown similar decreases. White perch have dropped from 1,150,000 to 601,000 pounds, and yellow perch have shown a decrease from 1,370,000 to 189,000 pounds during the same period of time.

In 1940, the commercial fishermen of Maryland, recognizing the need for a means to restore their declining industry, held public meetings in all Tidewater counties to discuss the problem. At these meetings, a representative was chosen from each county to serve on a committee whose purpose was to devise a practical method for rebuilding the fisheries. This committee met repeatedly over a period of months, and finally drafted the present Maryland Management Plan. This was, therefore,

¹ This is the first of a series of four articles in explanation of Maryland's Fishery Management Plan.

the fishermen's own plan, written by their own committee, and expressed the ideas of men who knew just what procedure would be most beneficial to the fisheries, at the same time allowing the fisherman to do his job to the best of his ability.

It is seen, therefore, that the Maryland Fishery Management Plan is not an attempt to tell the fishermen how to do their job. It's an acknowledged fact that they already know it better than anyone else. Neither is it directed toward decreasing the efficiency of their efforts, by imposing regulations on the operation of their gear. It does not require them to shorten their nets, or to lift their gear at certain times, but is simply a means recognized by the fishermen themselves to be effective in preventing "the well from running dry."

The object of the Plan is not only to protect the fish, but the fishermen as well. Its operation assures the fishermen a constant, *increased* income, and at the same time promotes the restoration of the tremendous wealth of food resources in Maryland's fishing grounds. A simple explanation of the principle of the Plan is given in the following paragraphs.

The occasional appearance of an unusually large run of fish is an occurrence familiar to all who are in any way associated with water as their means of livelihood. Equally familiar to them is the accompanying influx of "fair-weather fishermen," men who ordinarily follow other lines of work and who are simply drawn into fishing by the opportunity for an easy income. The results of such an influx are obvious—first, a glutted market, with reduced prices which prevent the regular, full-time fishermen from reaping their fair shares of the "bumper crop;" second, a serious reduction in the brood stock of fish which would assure a good run in succeeding years if only the *normal* number of men were operating; and, third, the depletion in a single year of a crop of fish that would supply the full-time watermen for three or four years with fish of constantly increasing weight and value.

The promise of increased yields of fish has been used as a selling point for the Management Plan. How can these yields be accomplished? There are two ways. First, by maintaining the number of fishermen at a level that will insure sufficient brood stock to reproduce successfully year after year. The second, and more immediately noticeable effect, is by the increased weight and value of a fish from one year to the next.

The idea cannot be too strongly emphasized that the fisherman suffers no loss by allowing some of the fish to escape his nets. Since a fish can be caught and marketed only once, it is obvious that a fisherman should get as much as he can in pounds and dollars when he does catch that fish. A fish which escapes the net for a season not only increases in size and value, but has the opportunity to spawn, and add materially to the future stock of the fishery. However, the fisherman can't stand by and wait for the fish to grow up before he sets his net, and the Management Plan doesn't expect him to do that. It will simply maintain the number of fishermen operating in Maryland waters at the present level until increased yields indicate that additional fishing will not be injurious to the fish or the fishermen. *Observe that the number of fishermen is not to be reduced, but held at its present level.* Fishermen now operating will not be put out of business or have their gear reduced simply to protect the fish, but new fishermen and additional gear will be prevented from entering the already over worked fishery.

The next question to arise regarding the Management Plan is whether or not it is practical, whether or not it will actually work. Before that question is answered, let us consider briefly other remedies which have been suggested and tried in past years in Maryland. Measures have been adopted which imposed size limits on the fish, others have limited the length of the fishing season, and still others have restricted the type of gear in certain areas. The results have all been discouragingly similar. Not only has there been no increase in the depleted fisheries, but to the contrary, a continued decline has taken place. The reason for the failure of these measures is easily seen, and is in all cases the same. When an increase did occur, it was immediately wiped out by "gold rush" fishermen coming in to reap the profits, and the fisheries were set back to the same, or to a lower level than before.

However, the principle of reduced fishing, upon which the Management Plan is founded, has been proved practical and effective. The shad fishery of the Hudson River, which increased from 40,173 pounds in 1916 to 4,243,000 pounds in 1942, showed that increase simply because fewer nets were used in the fishery. In this case, however, no management plan was responsible for the decrease in gear. It was merely a case of the fishery being so depleted that many of the fishermen couldn't make a living, and had to drop out. The increase in shad resulting from the reduction in nets was maintained and further built up

by the application of sound management. At the present time the Hudson River fishermen are enjoying better runs of shad than ever before in the history of the fishery.

In Maryland, only the development and continuation of practical fishery management can achieve results comparable to those of the Hudson. As has been previously mentioned, none of the present fishermen will be forced out, but the number will simply be held at a level which will assure both a constant, increased income and an increased yield from the fisheries. Fishery management will include the maintenance of continuing, accurate scientific and statistical records throughout all fishing areas of Maryland. When a satisfactory increase is obtained, and it is known that additional fishermen or gear will not injure the fishery, more men will be allowed to obtain licenses.

In the three years that the Plan has been operating, definite increases have been observed. There is evidence for believing that these increases will be doubled, redoubled and again redoubled if this sound conservation plan is given a chance to enlarge the beachhead already established in the campaign for greater wealth from Maryland's tidewater.